

S205529



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D6005-180
Job Sheet 183069



Part No: D6005-180

Job Qty: 20 ea

Part Name: Crosstube Material



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 9/12/18

Job Tracking No:

Due Date: 5/22/19

Created By: Chantal Lavoie

Type: Stock

Description:

Note: DWG REV B

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Purchasing	20 pcs		5/22/19	0.00	0.00	Purchasing		AT 19/08/14
110	Packaging	20 pcs		5/22/19	0.00	0.00	Packaging2		AT 19/08/14
120	QC	20 pcs		5/22/19	0.00	0.00	QC18		61
130	HandFinish	20 pcs		5/22/19	0.00	0.00	HandFinish1	N/A DD	9-89
135	QC	20 pcs		5/22/19	0.00	0.00	QC7-5	N/A DD	DAS
140	Packaging	20 pcs		5/22/19	0.00	0.00	Packaging3	3-24B	66 2019-08-15
150	QC21-SA	20 Ea		5/22/19	0.00	0.00	QC21	New	9-89

Part Op 100 - Issue P/O: 41002 a) Order as per Dwg D6005 b) Material: I 7075-T6/T6511 (WW-T-700/7 or QQ-A-Descriptions: 225/9 or QQ-A-200/11) seamless aluminum tube e) Material cert's is required

110 - Ensure material certification is attached

120 - Ensure Material certification comply to Dwg

DAS
13
9-89

SEP 21 2018

20 pcs

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D6005-180P	Crosstube Material	20 pcs (1 ea)	100-Purchasing	S205525

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Purchasing	D6005-180P	20	0	0

Part Specifications

Specifications could not be found.

Plex 9/21/18 1:08 PM dart.lavoie.chantal



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K64 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Container No: S205529



Part: D6005-180

Job No: 183069

Serial No/Batch: S205529

Revision:

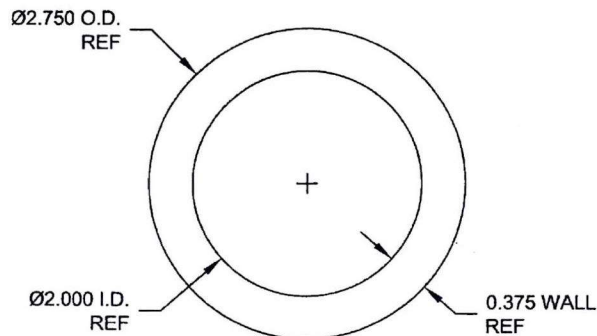
Inspector:

Exp Date:

Instructions: Various STC's

Date: 08/14/19

SPECIFICATION CONTROL DRAWING



SEP 2 1 2018

CL

W10' 183069

NOTES

- 1) D6005-XXX CROSSTUBE
LENGTH

WHERE XXX IS LENGTH IN INCHES
EG. 128" LONG TUBE: D6005-128

- 2) MATERIAL: 2.750 OD x 0.375 WALL 7075-T6/T6511 SEAMLESS ALUMINUM TUBE.
PER ASTM B210 OR WW-T-7007 OR QQ-A-225/9 OR QQ-A-200/11
MINIMUM ULTIMATE TENSILE STRENGTH = 77 ksi
MINIMUM YIELD TENSILE STRENGTH = 66 ksi

- 3) TOLERANCES ARE AS FOLLOWS:
O.D.: ± 0.008 MEAN (± 0.012 INCLUDING OVALITY)
WALL: ± 0.015 MEAN (± 0.038 INCLUDING ECCENTRICITY)
LENGTH: XXX $+0.125/-0.000$
STRAIGHTNESS: 0.010" DEVIATION / 12" LENGTH

- 4) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
5) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

RELEASED
P 13/2/17
PBR Ecn 15-587

B	O.D. TOL. NOW 0.008 WAS 0.006, ADD ASTM B210	CP	12.10.29
A	NEW ISSUE	CP	00.11.17
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	12.10.29		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. D6005
TITLE CROSSTUBE MATERIAL
REV. B
SHEET 1 OF 1
SCALE NTS

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Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO041102**

Supplier: ALU001-VU
Aluminiumwerk Unna AG
630-3033 SOUTH PARKER RD
AURORA, CO 80014 USA
Phone: 303 755 5672
Fax: 303 755 5936

PO No: PO041102

PO Date: 9/21/18

Due Date: 5/22/19

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Phone:

Via: Ground

Pymt Terms: Net 30

Freight Terms:

Special Comments:

E-MAILED
SEP 21 2018

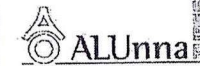
Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Items

Line Item	Job	Part	Supplier Part No	Item No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1/	183069	D6005-180P			Crosstube Material	Firmed	-	5/22/19	20 pcs	0 pcs	20 pcs	\$686.55/pcs	\$13,731.00
					AS PER DWG D6005-180 REV. B					17x	At 11/02/14		
					MAT'L: 7075-T6/T6511 AS PER WW-T-700/7 OR QQ-A-225/9 OR QQ-A-200/11								

Packing List Aluminiumwerk Unna AG

Page 1 of 1



Order		Article		Box marking								
Commission-No.:	73698	Outer Diameter (Inch):	2,750	DART AEROSPACE / P.O. PO041102 / D6005-180P MADE IN GERMANY / DEST.: HAWKESBURY ONT, CANADA								
Item No.:	100	Inner Diameter (Inch):	2,000									
Customer PO:	PO041102	Wall (Inch):	0,375									
Customer:	Dart Aerospace	Length (Feet):	15,00									
Date:	04.07.2019	Drawing:	69,85 x 9,52									
Comments:		We hereby declare, that the wooden packing material are totally free from bark and apparently free from live plant pests.										
Box No.	Boxdimensions				Total number of pieces and weights				Cast/Heat-Groups in the box			
	Length (Inch)	Width (Inch)	Height (Inch)	Volume (cbm)	Pieces	Net lbs	Tare lbs	Gross lbs	Position	Pieces	Cast-No.	Heat-No.
1	185,039	22,441	22,441	1,527	17	875,234	244,713	1119,947		17	1099	1310261
Total:				1,527	17	875,234	244,713	1119,947		17		

AK

Abnahmeprüfzeugnis 3.1 - DIN EN 10204:2005

Inspection Certificate 3.1 - DIN EN 10204:2005 / Certificat de Reception 3.1- DIN EN 10204:2005

Kunde: Dart Aerospace Ltd.
Client:

1270 Aberdeen Street
K6A1K7 Hawkesbury, ON Canada

Zeugnisnummer: 1548/19
Cert No. / No. du certificat:

Bestellnummer: P0041102
Order No. / No. de commande

Produkt: Rohre nahtlos gepresst

Product / Produit: Tubes seamless extruded

Spezifikation: AMS - QQ - A - 200/11(A); Spezifikation Dart Aerospace D6005

Specification:

Werkstoff:

Alloy/Alliage:

Abmessung:

Size / Dimension

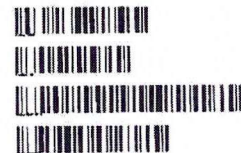
2,750 INCH x 2,000 INCH x 0,375 INCH x 180,000 INCH
D6005-180

Zustand:

Temper/Etat

x 180,000 INCH

T 6511



Kennzeichnung

Marking/Marquage:

ALUnna - Cert No. 1548/19- AMS-QQ-A-200/11(A) - 2.750" OD x 0.375" WT - 7075 - T 6511 - Cast No.1099 - Heat Lot No. 1310261-
ALUnna Order Confirmation No.73698/100 - P.O. 041102

Lieferung

Delivered Material / Matériel délivré:

pcs.

17

lbs

875

Country of Manufacture: Germany

Products are in accordance with applicable RoHS

Other elements
each max. 0,05 %, total 0,15 %

1. Chemische Analyse

Chemical Analysis / analyse chimique

Charge/ min. Cast No. max.	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Zr	Bi	Sn	Ni	Na
	0,40	0,50	1,2	0,30	2,1	0,18	5,1							
			2,0		2,9	0,28	6,1	0,20						
1099/19	0,073	0,176	1,628	0,041	2,429	0,268	5,988	0,031	0,0043	0,0338	0,0010	0,0010	0,0086	0,0001

Hydrogen content: 0,11

ccm/100 g Al

Elements without indication < 0,01 %

country of melt manufacturer: Germany

9952/19	0,102	0,166	1,393	0,052	2,236	0,212	5,785	0,035	0,0028	0,0172	0,0010	0,0010	0,0049	0,0001
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Hydrogen content: 0,13

ccm/100 g Al

Elements without indication < 0,01 %

country of melt manufacturer: Germany

2. Mechanische Eigenschaften

Mechanical Properties / Valeurs Mécaniques

Anforderungen Requirements	tensile (Rm) ksi	yield (Rp0,2) ksi	elongation 2" %	elongation A %	Hardness HB	Heat Lot No.
	77,0	66,0	7,0			
1	82,9	74,7	11,8			1310261
2	84,0	75,9	11,0			

RMS max. 25 = Ra max 0,58 µm: act.: 11,6 µ"

**Ergebnis der
Prüfungen:**

Es wird bestätigt, daß die Lieferung geprüft wurde und den Vereinbarungen bei der Bestellannahme entspricht

Test results:

We confirm that the delivery has been tested and applies to the agreements made on receipt of the order

Resultats:

Nous confirmons que la livraison a été contrôlée et correspond avec les conventions faites à la réception de la commande

mergardtri

09.07.2019

Certified acc. DIN EN ISO 9001:2015 and DIN EN 9100:2016

valid until 2019-11-10

TÜV Nord - Cert.- Reg. No.: 44 100 131576 and 44 117 131576

Aluminiumwerk Unna AG, Uelzener Weg 36, 59425 Unna, Germany



ALUnna

Abnahmebeauftragter

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: D6005-180
 DATE: 1902/14

PO / BATCH NO.: 90041102/5205529

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 17x
 QUANTITY INSPECTED: 17x
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.375"
 THICKNESS RECEIVED: 0.375"
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	☒ N	
CORRECT FINISH	☒ Y	N	
CORROSION	Y	☒ N	
CORRECT GRAIN DIRECTION	☒ Y	N	
CORRECT MATERIAL PER M-DRAWING	☒ Y	N	AMS QQ-A-200/11
CORRECT THICKNESS	☒ Y	N	
PHOTO REQUIRED	Y	☒ N	
CORRECT REF # TO LINK CERT	☒ Y	N	HT: 1310261
CORRECT MATERIAL IDENTIFICATION	☒ Y	N	
CORRECT M# ON THE MATERIAL	☒ Y	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	☒ N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	☒ N	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>DAS 61</u> DATE: <u>AUG 14 2019</u>	SIGNED OFF BY: _____ DATE: _____	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in